



Nursing teleconsultation for older adults in Primary Care during the COVID-19 pandemic

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Abstract

Objective: To identify the potentialities and shortcomings involved in the applicability of nursing teleconsultation to older adults in Primary Care during the pandemic. **Method:** A qualitative, exploratory, descriptive study was carried out from March to April 2022 of 30 nurses working in Primary Care in the city of Florianópolis, Santa Catarina state, Brazil. Data were collected through semi-structured individual interviews and analyzed using Minayo Thematic Analysis involving three stages: pre-analysis; exploring the material; and treatment and interpretation of the results obtained using inductive analysis. **Results:** The potentialities of nursing teleconsultation included expanding access to health services; providing continuity of care and protection for older adults during the pandemic period and transcending geographical barriers in care delivery. The shortcomings involved difficulties with the use of technologies by the older individuals, breakdowns in the communication process, and the need for the presence of a family member or caregiver during teleconsultations. **Conclusion:** Teleconsultation in nursing is a technology used in many countries that has gained traction in Brazil due to the coronavirus pandemic and become an important resource for expanding access, providing care continuity and maintaining the bond between family health teams, older adults and their relatives. However, this technology needs further improvement to overcome the difficulties experienced by both users and professionals in its use.

Keywords: Remote Consultation. Telenursing. Nursing. Aged. Primary Care. Pandemics.

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INTRODUCTION

In 2020, the world ground to a halt with the outbreak of the COVID-19 (Corona virus disease-19) pandemic caused by the SARS-CoV-2 novel coronavirus. This marked a period of uncertainty and concern during which health professionals and researchers worked tirelessly to seek solutions.

Amid this situation, the older population was deemed a high-risk group, particularly individuals with more than one comorbidity¹. Lockdowns and vaccination were effective protective measures required to ensure the safety of the older population during the pandemic^{1,2}.

The vulnerability of older adults was exacerbated by the COVID-19 pandemic. With the imposing of lockdown, the ensuing changes in routine had a major impact on the lives of older individuals, and feelings of insecurity, fear of death, loss of spouses, family members and friends were elements which had many emotional and psychic consequences³.

Therefore, strategies needed to be devised to ensure continuity of health care provision to older patients while guaranteeing their safety amid the coronavirus. In this scenario, digital health technologies became a key ally of the population and health professionals during the pandemic⁴.

Prior to the pandemic, early discussions on the use of nursing teleconsulting were already underway. In 2020, COFEN resolution no. 634/2020 was introduced to governing nursing teleconsulting practices as an emergency strategy in response to the pandemic⁵.

In 2022, COFEN released resolution no. 696/2022 which regulated nursing in digital health under the Brazilian national health system (SUS), officially establishing telenursing in Brazil⁶. Telenursing comprises: nursing consultations; interconsultations; consulting; monitoring; health education and catering for spontaneous demand, supported by the use of technology⁶.

Teleconsultations can be supported by the use Information Communication Technologies (ICTs), such as: telephone calls, video calls/conferencing,

apps, mobile devices, e-mail, voice messages, software among others^{7,8}.

Primary Health is the “front door” to the national health system (SUS) and manages the care journey, plays a critical role in engagement and follow-up of the health of the older population, through health promotion, prevention, diagnosis, treatment and rehabilitation of users, family and the community.

Incorporating nursing teleconsulting into primary care was challenging, particularly for older users who, during the pandemic, ceased to seek health care services due to lockdown restrictions.

In this context, the present study poses the following research question: what were the potentialities and shortcomings experienced by nurses in delivering nursing teleconsulting to older adults in the primary care setting?

Therefore, the objective of this study was to identify the potentialities and shortcomings involved in applying nursing teleconsulting to older adults in the primary care during the pandemic.

METHOD

A qualitative, descriptive, exploratory study was conducted according to the recommendations contained in the Consolidated criteria for reporting qualitative research (COREQ).

The study setting was Primary Care service of the city of Florianópolis (Santa Catarina state, Brazil). The elected study sites were Health Centers of neighborhoods with a high number of older registered users, as identified from data furnished by the Municipal Secretariat for Health. Based on this criterion, a total of 12 Health Centers were included, located in the downtown, continental and northern regions of the city.

The study sample comprised 30 nurses practicing at the selected Health Centers and who agreed to take part in the study. An initial total of 32 nurses were recruited for the study, 2 of which subsequently dropped out before the data collection period, giving a final total of 30 participants.

The inclusion criteria were: aged ≥ 18 years; hold nursing degree; practice in Primary Care; delivered some form of teleconsulting session involving older adults during the 2020-2022 period. The exclusion criteria were: nursing residents and professionals on vacation, leave of absence or sick leave.

Data collection was performed during the period March-April 2022 via individual semi-structured interviews, sound-recorded face-to-face with the nurses. Interview duration was, on average, 15 minutes.

The interview script comprised 5 initial guiding open-ended questions, probing the respondent's experiences with nursing teleconsultation involving older adults. After analysis of results, 3 questions directly addressing the study objectives were posed: "Was nursing teleconsulting with older adults part of the your professional routine practice? Tell me more about it"; "Did you note any difficulty with this form of consultation?" and "Do you think teleconsulting contributes to nursing care for older adults?".

The School of Public Health (ESP) of Florianópolis sent an informative email about the study to the selected Health Centers inviting nurses to take part in the study. After contact of the researchers with the coordinators of the Health Centers, interviews were scheduled with the nurses who expressed an interest in taking part in the study at a time of their convenience. All participants received information about the study before data collection and signed an Free and Informed Consent Form.

Data analysis using the Minayo Thematic Analysis method⁹ was performed to elucidate and explore the subjects' perceptions on the theme. The method entails 3 stages: pre-analysis, exploring material, and treatment and interpretation of results obtained⁹. Results were examined using inductive analysis, i.e. the categories and subcategories were not established beforehand.

In the pre-analysis, all of the sound-recorded interviews were transcribed in full and placed in a document by the researchers and floating reading of the interview was carried out.

In the next stage, the material was explored, with interviews grouped and organized into a spreadsheet to aid visualization, interpretation and analysis of the

results obtained. In-depth reading of each interview was performed, selecting important passages and deriving the principal thematic categories. Subcategories were established, comprised by relevant structures that commonly occurred in the context of the respective theme.

The final stage of analysis – treatment and interpretation of the results – yielded only the most significant thematic categories and subcategories exhibiting similarities or differences and their relationships with the themes assessed.

The study was approved by the Ethics Committee for Research in Humans under permit no. 5.268.475 and CAEE certificate 53326321.0.0000.0121 of the Universidade Federal de Santa Catarina (CEPSH-UFSC) and board of ethics of the School of Public Health of the Municipal Secretariat for Health Florianópolis. The study was carried out pursuant to resolution nos. 466/2012 and 510/2016 governing ethical aspects of research involving humans.

DATA AVAILABILITY

The complete dataset underpinning the results of the present study are available on figshare from <https://figshare.com/s/7add7a8af11106020dce>.

RESULTS

A total of 30 nurses were included in the study with age ranging from 28 to 54 years. Stratifying by age group, 12 (40%) participants were aged 28-34 years, 15 (50%) were 35-44 years and 3 (10%) were 45-54 years. Regarding gender distribution, 27 (90%) participants were female and 3 (10%) male.

In terms of academic qualifications, time since graduating with nursing degree ranged from 5 to 33 years. For post-graduate profile, 20 nurses (66.6%) had specialized in family health, primary care or public health and, of this group, 13 (43.3%) had performed a residency in Family Health. Participants had worked in the Primary Care setting for a duration ranging from 1 year 4 months to 20 years. Of the overall sample, 17 nurses (56.6%) had worked in primary care for 1-10 years and 13 (43.3%) for 11-20 years in the area.

There were 3 categories: nursing teleconsulting as a clinical practice tool, potentialities and shortcomings. Subcategories were derived based on pertinent themes evident from the interviews, constituting the main findings of this study. The subcategories are described within the main categories and are outlined below.

Nursing teleconsulting as a clinical practice tool

The practice of nursing teleconsulting

The city of Florianópolis devised a protocol guide for nursing teleconsultations to standardize and provide guidance for this service in Primary Care. Teleconsultations were requested in advance by users or family members and conducted using the institution's technology resources such as Health Center cell phones, landlines and computers assigned to Family Health Teams.

“I generally arrange with the patient a time when they are most at ease. [...] I decide together with them on the type of consultation they want, whether they want a videocall, whether they want a voice call” (E10).

“We started using the team *WhatsApp* from 2020 onwards after the pandemic, because people had to isolate, particularly older adults. [...] We did teleconsulting using WhatsApp which is institutional. [...] Patients with mild symptoms, we would provide telecare, provide prescriptions and gave medical advice, and in more severe cases we would ask them to come in”. (E27)

Technologies used in teleconsulting for older adults

The technologies most used by nurses from Primary Care in teleconsultations were: WhatsApp®, Google Forms for scheduling appointments, videocalls and telephone calls.

“We often say that WhatsApp became a second front door to Primary Care. So in Primary Care there is our front door which is already open and now we have 2 doors right”. (E7)

Videocalls were cited by nurses as the best tool for conducting teleconsultations, but was the technology that caused most difficulties for older adults for being a new more digitally complex tool in their lives. Telephone calls facilitated communication between nurse and patient, because it was a mechanism more familiar to them.

“I think videocalls are the best type of teleconsultation because we can see the patient, we know it's them, we confirm it's really them right. But even so, they still have greater difficulty with this technology, so I end up using voice call with them. I talk with them, generally calls of 9, 10 minutes?”. (E10)

“With older patients we always prefer to call, for being easier to explain right, to converse and everything”. (E7)

Needs catered for

In the context of the need catered for via nursing teleconsulting for older adults, these were predominantly related to routine health of users, such as consultations for monitoring chronic diseases, ordering tests, renewing prescriptions and also to provide continuation of therapy groups such as the quit smoking group, cited by respondents.

“Most teleconsultations are to clear up doubts, there are also a lot of requests for renewing prescriptions, checking tests, they send the tests, the a photo of results, we assess it the physician then also follows up” (E8)

“Prescription renewals, clinical needs, referrals, so we used this resource a lot. [...] Only urgent cases were called in to the clinic face to face”. (E12)

“I did more videocalls with older adults for treating tobacco use [...]. Smoking is something that can be done remotely, it's very welcome because we do not need to carry out many evaluations”. (E2)

Potentialities

Expanding access and care continuity

The potentialities of nursing teleconsulting in Primary Care constitute expanding access and

ensuring continuity of care for older adults. The incorporation of ICTs in Primary Care improved the service and the communication between Family Health Teams and patients while reducing waiting times at clinics.

“It’s an additional tool for the service isn’t it... For access to the patient and for the patient to access the team”. (E11)

“I think the issue of self-care I think it’s really important and something we can do via teleconsulting. It’s stimulating their self-care isn’t it”.. (E20)

“I think it helped a lot because we managed to provide follow-up, for example for people with diabetes, hypertension. We at no point ceased to order routine tests to assess these issues”. (E24)

“So we believe that the care was well organized, we managed to provide care continuity by using teleconsulting, they were not left unattended”. (E25)

Strategy amid the pandemic

Nursing teleconsultations provide greater safety for older adults amid the pandemic, serving as a tool to support face-to-face consultations, reducing exposure of older users to crowded places which pose higher risk of transmission of respiratory infections such as COVID-19.

“Especially involving these users, a high risk group. We sought to facilitate this service without exposing them to people presenting respiratory symptoms”. (E13)

“With the pandemic, many older adults ended up being more isolated, so this access to the health center became more restricted. And we strongly encouraged this alternative of teleconsulting so as to prevent them from being at risk here in the health center.” (E25)

Technology transcending geographical barriers

Guaranteeing access to older individual that cannot travel to health centers was also made possible by teleconsulting. This technology benefited older

adults unable to travel due to motor difficulties, and/or because they were bedridden and/or living in remote areas far from health services.

“For this group of users it helps, in terms of traveling right. They are older individuals, who generally have difficulty coming to the health center due to mobility issues and the fact we are located in a place that’s hard to reach. (E13)

“It helped because the patient oftentimes cannot make face-to-face visits because they live far away and have difficulty walking.” (E14)

“Our clinic is on a hill, so patients sometime find it tough to make it up, so they don’t need to come just to request something simple”. (E29)

Shortcomings

Difficulties using technology

The process of implementing nursing teleconsulting for older adults involved barriers with regard to use of technology, The nurses noted that older users struggled to use the WhatsApp® and cell phone, and had problems filling out Google Forms and sending files.

“And older adults really faced this difficulty accessing WhatsApp, they didn’t know how to use it, many had no email, it was a stumbling block for us. (E6)

“And for older adults we see the main difficulty it this, attaching a test, an image and also to reply, sometimes they had problems writing”. (E7)

“So we see that the main difficulty with respect to teleconsulting with older adults is on their side, difficulty using cell phones, with the communication mediums for performing teleconsulting.” (E26)

Dependence of older adults on family members and caregivers

Given the marked difficulty using digital technologies encountered by most of the older patients attended by teleconsulting, the need of the assistance of family members or the dependence

on others to book sessions represented a barrier for older individuals.

“Perhaps the stumbling block was having to depend on someone else to facilitate this contact and to understand the information”. (E1)

“Normally, these consultations with older adults are held together with a companion, but for users without this help, companion or carer, things are more difficult”. (E15)

Communication difficulties

When dealing with older individuals, it is important to take into account aging-related limitations, such as hearing loss, reduced visual acuity, impaired motor abilities, factors which can hamper this type of service. Breakdowns in communication and misinterpretations are common during online sessions with older users.

“Many have hearing or visual deficits, so this is exacerbated online, with these limitations”. (E4).

Access difficulties for vulnerable populations

Socioeconomically-vulnerable populations raise questions regarding the practice of nursing teleconsulting in terms of older individuals and/or family members that do not have access to the internet or digital devices required to interact with their online Family Health Service.

“In Primary Care, we work with a population that is often more vulnerable, so when they say “I don’t have WhatsApp that because they really don’t, sometimes it’s on old telephone and that’s all they have”. (E19)

Challenges for professionals

The professionals also faced difficulties in this process. Carrying out physical exams and clinical assessments online has posed a challenge and gives rise to feelings of insecurity with regard to the service provided. Difficulties addressing the mental health

needs of older individuals using teleconsulting were an issue for the nurses. Work overload and increased demand were also detractors.

“We worked in the same way as for a normal office visit, only via teleconsulting and with no physical examinations, which for us is really bad, because the patient can present changes in vital signs and weight, which is really important for us to check at the office”. (E3)

“Also among the mental health issues [...] sometimes there’s a son/daughter present, sometime the patient does want to talk about that situation in front of others in the house”. (E28)

“Arranging time in our schedules to fit in this type of service is also hard sometimes, it demands time, organization, so we aren’t always able to work as effectively as we would like”. (E15)

DISCUSSION

The recent COVID-19 pandemic redefined the way health was delivered worldwide, where digital technologies play a major role in this process, enabling new approaches to ensure provision of care and safety of older adults amid the pandemic⁴

In response to the pandemic, the Brazilian Primary Care service incorporated the use of smartphones running WhatsApp[®] into routine care, which was implemented as the main demand organizing tool¹⁰. The use of this app provided efficient interaction between users and their Family Health Team and vice-a-versa. However, this gives rise to concerns over data security, since the regular use of apps, while offering users ease of use, creates insecurity over the confidentiality of information¹¹.

Technologies dedicated to teleconsulting were already undergoing development in some countries, such as the TeleDoc¹² and TeleHealth¹³ systems. These systems, besides providing videocalls, allow checking of vital signs and performing of electrocardiograms at the same time, in a bid to overcome shortcomings in clinical assessment and data security.

Videocalls are the digital medium of choice for nursing teleconsulting involving older adults,

enabling the patient to be seen and heard in real time, analysis of their environment, their family members, caregivers and/or companions, affording a more holistic assessment¹⁴.

Nursing teleconsulting should be conducted after consent has been given by the user or their legal guardian (reported or written) and data related to the teleconsultation registered in the patient's medical record as stipulated by the Systematization of Nursing Care (SAE) guidelines^{15,16}.

Studies¹⁷⁻¹⁹ have shown positive impacts on care services for chronic diseases and mental health using teleconsulting, expanding health education efforts and improving adherence to treatments.

Regarding strengths, digital technologies enable broader access to health services^{11,12}, allowing care delivery to older patients living in places hard to reach, rural or remote areas^{12,20-22}, a significant milestone for integrated health care in the older population²³.

The ability to provide continuity of care¹⁰ outside the clinic via nursing teleconsulting helped stay connected with older individuals, family members and nurses during the pandemic^{23,16}. This bond is vital to promote relationships of trust and commitment, centered on humanization of care and empathy^{21,24}, factors which repercuss positively on physical and mental health, while strengthening self-care practices^{19,25} and improving treatment adherence among older adults.

A Brazilian study²⁶ showed that follow-up of cancer patients undergoing chemotherapy using nursing teleconsulting via telephone calls allowed doubts to be cleared up, provided greater support for carers and helped in the recovery of patients at home.

The implementation of nursing teleconsulting for older users of the Primary Care service has proven an effective strategy for tackling the coronavirus¹⁰, as well as other communicable respiratory infections, providing older patients with peace of mind and transcending the longitudinal nature of health care in this population^{12,27}.

The aging process can be accompanied by limitations in gait and getting around, factors

which can render it difficult for older individuals to travel to health facilities. Teleconsulting emerges as a feasible option to help individuals experiencing motor difficulties²⁸, temporarily replacing home visits in cases where these are not possible.

With regard to the shortcomings in the application of nursing teleconsulting for older adults, these mainly involve difficulties experienced by this group of users with the technology²⁷, affecting communication during sessions.

Successful teleconsulting requires clear objective communication that is easy to understand, but technological limitations can become obstacles in this process. When involving older adults, the choice of the wrong technology can lead to technology-induced anxiety²⁹, where some technologies are more complex to use, depending on family members, friends or caregivers to handle teleconsultations, negatively impacting their autonomy and independence. In this context, it is important to establish which digital technology the older individuals is most familiar with before commencing nursing teleconsulting, thereby preventing breakdowns in communication during sessions²⁷.

Teleconsulting sessions can also be affected by external influences, such as noise, poor lighting, unstable connection, and low sound or image quality³⁰. Older users should be given guidance on choosing a suitable place in their homes which has a strong internet signal, is more isolated from noises and well-illuminated for a better quality consultation³⁰.

The use of teleconsulting has been challenging for the nurses and older adults alike, particularly due to the lack of physical interaction, touch, vision and even smell³⁰, hindering assessment of the patient by physical examination. Besides clinical knowledge, communication and active listening skills are paramount in nursing teleconsulting³⁰, constituting the main mediators of this process.

It is also fundamental to reflect on the creation of collective strategies to provide telenursing to individual in situations of social vulnerability for those who do not necessarily have access to internet or

electronic devices allowing distance communication with nurses, a scenario that is commonplace in Brazilian Primary Care, calling into question the equity of this practice²⁷.

Health professionals have faced an intense work overload since the outbreak of the pandemic^{24,31}. A return to face-to-face consultations within Primary Health poses the dilemma of reconciling in-person with online sessions, bringing to the fore the challenges of restructuring the organization of telenursing in the Primary care setting.

It is also important to bear in mind that teleconsultations have inherent limitations and that, in certain situations, face-to-face assessment of the patient is needed for better clinical management and a different approach required for the visit.

A limitation of the present study was the dearth of previous studies investigating nursing teleconsulting for older adults in the Primary Care setting.

CONCLUSION

The study revealed the issues involved in use of nursing teleconsulting for older users in the Primary Care system.

The results showed that, despite its shortcomings, nursing teleconsulting for older adults is a technology that provides wider access, care continuity, consultation efficiency, transcends geographical barriers, maintains the bond with older adults and can also be used a support tool for face-to-face visits.

Therefore, the study adds to the area by helping to provide visibility, refine and expand the potential of telehealth in geriatrics and gerontology in Brazil.

Lastly, further studies investigating the topic are vital for devising strategies to overcome the shortcomings identified and enhance the practice.

AUTHOR CONTRIBUTIONS

- Cinara Grein Kuhn: Administration of the Project, Writing – First Draft, Formal Analysis, Investigation, Data Curation and Methodology.
- Maria Fernanda Baeta Neves Alonso da Costa: Writing – Review and Editing, Formal Analysis, Methodology, Supervision and Validation of the version for publication.
- Juliana Balbinot Reis Girondi: Conceptualization; Writing – Review and Editing; and Validation of the version for publication.
- Mayara Marta Rodrigues: Conceptualization; Writing – Review and Editing; and Validation of the version for publication, and Visualization.
- Melissa Orlandi Honório Locks: Writing – Review and Editing; Validation of the version for publication, and Visualization.
- Anderson Abreu de Carvalho: Writing – Review and Editing; Validation of the version for publication, and Visualization.

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